THE NEW RAILWAY TOWN, SWINDON.—Swindon, on the Great Western Railway, like Wolverton, on the London and Birmingham, and Crewe, on the Grand Junction, is one of the extraordinary products of the railway enterprise of the present day. Until lately Swindon was remarkable for nothing but heath and upland; it is now the nursery of a new community, the seat of well-ordered industry, and a colony of engineers and handicraftsmen. The total sum expended on the locomotive establishment at Swindon, including engines and carriages, is about 550,000*l.*, exclusive of the expense of engine-house, machinery, and tools, amounting to 26,500*l.* The average half-yearly expenditure in wages to engine-drivers, firemen, guards, servants, porters, clothing, &c., is 140,000*l.* The company manufacture their own engines at the factory, where cleaning and every thing connected with constructive repair is carried on. The number of mechanics, including engine-drivers, firemen, fitters, coppersmiths, cleaners, and labourers, constantly employed, varies from 300 to 350. Swindon consists of neat brick buildings, and is so far adjacent to the line as to be seen by the passing trains. The total population is upwards of 800. A library and reading-rooms have already been formed for the use of the inhabitants and servants of the company, together with a Mechanics' Institute. The church, which is being built entirely of stone, under the superintendence of Messrs. Scott and Moffatt, is nearly completed. It is in the decorative style of the 14th century, with aisles, clerestory, chancel, tower, and spire. The entire structure is 140 feet high, and will accommodate 800 persons, all the sittings being entirely free. The estimated cost is between 5,000*l.* and 6,000*l.* Its consecration by the Bishop of Gloucester and Bristol is fixed for Friday, the 25th of April, St. Mark's day, and it is to be dedicated to this evangelist. Adjoining the church, at the east and west, are the schools and parsonage, built in a style corresponding with the church, at a cost of 1,700*l.* On the south of the church a spacious piece of ground has been purchased by the Great Western Company, and laid out as a park or pleasure-ground for the inhabitants.

BARN FLOORS.—A correspondent of the *Mark Lane Express* states, that having a very bad barn floor, he thought of boarding it, but the expense was an objection, as the boards would require to be very thick; besides, he had observed that a floor of that kind in the neighbourhood had become splintered by the flails, was rotted by the damp, and gnawed by rats. Happening to have a large number of unsaleable pieces of timber, coarse, crooked arms, and knotty ends, that were altogether worthless, even for firewood, for it was impossible to split them, it occurred to him that they would make an excellent surface for his barn floor. He thus describes the mode he adopted in carrying out this idea and success that attended it. "I had an X cross cutting stool made, on which these logs were placed, and cross cut into blocks of a foot long; the bark and any excrescences having been chopped off by the hatchet, the blocks were thus reduced to irregular figures of all shapes, no matter what. The floor having been excavated to the proper depth and levelled, blocks were placed at distances so as to be levelled by a long hand level, and the whole surface levelled off from those by a straight edge. The blocks were laid down on their ends, having the cross cut surface or end of the grain upwards; the best face of course up, and some attention being paid to their mutual adaptation with regard to fit; but, of course, with such a variety of irregular figures there were numerous cavities between—these were filled as well as might be by smaller blocks, thus occupying the larger spaces. Still lesser pieces were now put into the remaining openings, and dry sand were swept over till the holes were filled up to near the top, and the remaining interstices were filled with wedges, the heads of which were sawed and adzed off; all was rammed down with a common paving hammer. This floor has now been a year in use, and is perfection itself for its purpose. The cost was trifling: two labourers in a fortnight cut most of the blocks; and the carpenter, with a handy assistant, laid them in a few days. The wedges should not be driven hard, nor until the blocks are well confined, or they will be spread asunder by the wedges."

MEASUREMENT OF WOODEN SLEEPERS FOR RAILWAYS.—The following is a copy of a new rule or method, approved by the commissioners of the customs, for the measurement of wooden sleepers of a triangular form, usually imported for railway purposes, when measured singly:—"The length to be taken to the quarter of a foot, and the perpendicular height to be taken to the quarter of an inch, adding thereto the height of the defective angle, which together will constitute the entire perpendicular height; one-half of the base to be then taken, and the contents ascertained by the inverted side of the sliding rule, as directed in the measurement of unequal-sided timber. An example is given of a piece of timber of the description and shape imported in large quantities for the purpose stated, the length being 8½ feet; the base or breadth at the end, 11 inches; the perpendicular, 6½ inches; with 1 inch defective angle: for instance, by the pen:—

5.5 ½ base.
7.5 perpendicular.

275
385

4125
8.25 length.

20625
8250
3.3000

144 \310.3125 (2.3-10ths.
288

523
432

19

Operation by the sliding rule. Set 7½ inches, the perpendicular height (the defective angle being added thereto) on the inverted line E to 5½ inches—one-half the base on line C; then opposite to 8¼, the length in feet on the line A will be found 2.3-10ths on the line B, the content in cubic feet for duty." This order has been communicated to revenue officers at this port and at the various outports of the kingdom by directions of the commissioners for their future government.

IMPORTANT DISCOVERY. — A scientific gentleman, residing at Ipswich, Mr. Frederick Ransome, engineer, has lately discovered a method whereby the hardest stone can be brought into a consistence resembling common putty, so that it can be cut and moulded into any shape, for useful and ornamental purposes, without altering its general character and appearance; for it becomes as hard, and in some instances even harder, than when subjected to the process. Another peculiarity of the process is, that any colour, or variety of colours, can be imparted to its solid substance, so that an endless variety of shades can be produced, and as it is capable of being polished, it effectually resists the action of the weather. It can also be used as a cement, and can be brushed over the surface of wood, so as to render it fire-proof.—*Sheffield Mercury.*

COPPER.—Returns of the average prices of copper purchased for the use of her Majesty's dock-yards in each year, from 1815 to 1844 inclusive, and of the price of cake copper in London during the same period, have been issued in the shape of a parliamentary paper, obtained on the motion of Sir C. Lemon, one of the representatives of the mining districts. From 1815 to 1832 the return is *nil*; in the year 1832, the average price of the copper in question was 82*l.* per ton; in 1833, 87*l.* 14*s.* 6*d.* per ton; in 1836, 111*l.* 7*s.* 1*d.* per ton; in 1839, 97*l.* 10*s.* per ton; in 1840, 102*l.* 2*s.* 6*d.* per ton; in 1841, 102*l.* 6*s.* 10*d.* per ton; in 1842, 93*l.* 10*s.* per ton; in 1843, 92*l.* 10*s.* 9*d.* per ton; and in 1844, 83*l.* 7*s.* per ton. The Admiralty department possesses, it appears, no official means of furnishing the price of cake copper in London during the period stated.

STATUE TO GEORGE STEPHENSON, ESQ.—It is said to be in contemplation to adorn the splendid high level bridge across the Tyne, about to be constructed under the auspices of Mr. Hudson, with a noble statue in honour of George Stephenson, Esq., the eminent civil engineer, a native of Newcastle-upon-Tyne, and beyond all doubt one of the greatest men of the day.

NEW STOCK-EXCHANGE AT BRISTOL.—At Bristol, a large and influential meeting was held on Monday, the 31st ultimo, at the offices of Messrs. Bradley, Barnard, and Co., Albion-chambers, at which resolutions for forming a Stock Exchange were cordially and unanimously passed. John Kerle Haberfield, Esq., has consented to accept the office of president.

MUSEUM OF ARTS BILL.—The Museum of Arts Bill was opposed by Mr. Buck, who moved that it should be committed that day six months. Sir J. Graham hoped that Mr. Buck would not persevere in his motion. The government were prepared to support the principle of the bill, although its provisions went rather beyond the understanding which had been come to. He would recommend the postponement of the committee for a week, and in the interim he would devote attention to the subject, and take an opportunity of privately explaining to the hon. member the objections entertained to the bill in its present shape. This proposition was assented to, and the committee was accordingly postponed as suggested.

NOTICES OF CONTRACTS.

[We are compelled by the interference of the Stamp Office to omit the names of the parties to whom tenders, &c., are to be addressed. For the convenience of our readers however, they are entered in a book, and may be seen on application at the office of "The Builder," 2, York-street, Covent-garden.]

For the supply of from 2,000 to 3,000 feet of new 2½ York Paving to the Commissioners for paving the Skinners' Estate, St. Pancras.

For the execution of certain Works required to be done in Hastings-street and Claremont-place, for the Commissioners of the Skinners' Estate, St. Pancras.

For the building of a new Bridge on the Rotherham and Pleasley Turnpike Road at Guilthwaite Common, near Rotherham, Yorkshire.

For the erection of Stone Arches and other works for the Newcastle and Carlisle Railway Company.

For the supply of Paving Granite, flint, Kentish Rag, and Gravel, to repair the highways of Saint Mary, Newington, from 23rd April, 1845, to Easter Tuesday, 1846.

For such Masons', Paviors', and Plasterers' Works as may be required at Hull for the Board of Ordnance.

For furnishing and fixing in the town of Southampton 205 Gas-lights, to consist of 81 Columns, and 124 Scroll Brackets, with the necessary Lamps, Pipes, Fittings, &c.

For taking down a tenement in Bishop-street, Coventry, and erecting two Messuages on the site and ground adjoining.

For submitting a plan of a Tread-wheel, and constructing the same in the Common Gaol of Great Yarmouth, Norfolk.

For the restoration of the Parish Church of Grays Thurrock, Essex.

For all the Works to be done in the erection and completion of the new cast-iron Bridge over the Haven of Great Yarmouth; including the finding of labour, certain materials, &c.

For the construction of the third and fourth divisions of the Chester and Holyhead Railway.

For the supply of Materials to the Commissioners of the Metropolis Roads.

For providing, squaring, and laying new York Paving and Granite Curb, &c., for the Commissioners under the Bedford Paving Act, St. Pancras.

For various Engineers' and Joiners' Works required to be done at the new Workhouse, Birchfield-wood, Saubridge, Kent.

For the Masonry Work of several Viaducts and Bridges.

For performing the several works in building a new Workhouse at Tenterden.

For the formation and completion of a new Drain, being about eleven miles long, twenty yards wide, and five yards deep, for the Middle Level Drainage Commissioners. Also for the erection of a Staunch, several Bridges of wood with brick abutments, together with the necessary culverts, and other works.

COMPETITIONS.

For the erection of a Baptist Chapel at Folkstone.

For laying out the Grounds of the Victoria-park Cemetery, and for draining the same, making the roads, paths, and finding all necessary trees, shrubs, materials, &c.

Plans for a Church to be erected within the Borough of Kingston-upon-Hull.

Plans, sections, and elevations for a Terminus, and other requisite accompanying offices, for the Great Southern and Western Railway, Ireland.

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